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Michael J. Horgan

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JOHN P. O'BANION

O'BANION & RITCHEY LLP

400 CAPITOL MALL SUITE 1550

SACRAMENTO, CA 95814

EXAMINER

LANIER, BENJAMIN E

ART UNIT

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2432

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 08/908,994	Applicant(s) HORGAN ET AL.	
	Examiner BENJAMIN E. LANIER	Art Unit 2432	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3 is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 4-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed 07 July 2009 amends claims 1-14. Claims 15-20 have been added. Applicant's amendment has been fully considered and entered.

Response to Arguments

2. Applicant argues, "The server links the sender and receiver, yet without routing data through the server once the sender and receiver are authenticated as recited in the second to last element of the original claim. The above aspects are not anticipated by the Kaufman reference." This argument is not persuasive because Kaufman discloses that tickets are issued to senders and receivers after they have been authenticated, and that the tickets are used to secure communications from the sender to the receiver over communication equipment (Figure 5, 506) and not through the server (Col. 8, line 66 – Col. 9, line 9).

3. Applicant argues, "Claim 1 pertains more particularly, to securing the communication between sender and receiver over the public switched telephone network (PSTN), which starkly differs from the Kaufman reference." This argument has been fully considered and is persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Baratz, U.S. Patent No. 5,742,596.

4. Applicant's arguments, with respect to the rejections of claims 2 and 3 in view of Kaufman have been fully considered and are persuasive. The rejections of claims 2 and 3 in view of Kaufman have been withdrawn.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claim 10 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification does not support the amendments to claim 10 which require the anonymity of said sender device to be achieved in response to said system establishing a telephone call from said sender device to said telephony server, and not directly to said receiver device, and wherein the anonymity of said receiver device is achieved in response to routing the call over the public switched telephone network (PSTN), from said sender device to said receiver device, without communicating the telephone number of the receiver over the PSTN. The specification is completely silent with respect to the anonymity of the receiver/sender.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 2, 5-6, 10, 12, 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 requires the sender device to encrypt the selected data, and the trusted service provider then transmits the selected data to a receiving device, which renders the claims indefinite because the selected data is not transmitted to the trusted service provider.

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Additionally it is unclear if the trusted service provider has the means to decrypt the selected, or whether the transmission to the receiving device includes the encrypted selected data.

Claim 5 recites the limitation "said recipient identification information" in lines 1-2.

There is insufficient antecedent basis for this limitation in the claim.

Claim 6 requires the telephony server to be disconnected from "the call" in response to the telephony server establishing "said communication link" between said sender device and said receiver device, which renders the claim indefinite because claim 1 requires "a telephone call" initiated over "a communication link", "a second transmission" across "the communication link", and the secure exchange of data across "a single call". It is unclear from the claims, which "call" or communication link are being referred to by claim 6.

Claim 10 requires the establishment of a telephone call from said sender device to said telephony server, and the routing of the call to said receiver device, which renders the claim indefinite because claim 1 requires "coupling of said sender device and said receiver device for communication of said encrypted selected data without routing through said telephony server." Therefore, claim 10 appears to contradict the requirement of claim 1 to avoid routing of data through said telephony server.

Claim 12 requires one configuration of the sender device limits the sender device to calling out only the telephony server, however, no previous configuration has been claimed. Therefore, it is unclear whether the sender device is actually configured in this manner claimed, or whether this is merely a possible configuration.

Claim 20 requires the telephony sever to receive the encrypted information from the sender device and forwarding the information to the receiver device, which renders the claim

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indefinite because claim 1 requires the information to be forwarded from the sender device to the receiver device without being routed through the telephony server.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claims 1, 7, 8, 11, 12-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaufman, U.S. Patent No. 5,491,752, in view of Baratz, U.S. Patent No. 5,742,596. Referring to claims 1, 7, 8, 14-17, Kaufman discloses a secure communication system wherein a plurality of workstations are authenticated by an authentication server and provided with a ticket (Figure 5 & Col. 8, line 66 - Col. 9, line 3), which meets the limitation of a sender device configured to initiate a first transmission across a communication link, a server linked to the sender device by the communication link, the server configured to receive a transmission initiated by the sender device, to verify the authenticity of the sender device, to initiate a second transmission to the receiver device, and to verify the authenticity of the receiver device, the system protects the

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anonymity of both the sender device and the receiver device, a valid account on said telephony server must be established by said sender device as a condition for verification of authenticity.

The tickets are used to encrypt/decrypt data sent between workstations in the network (Figure 5 & Col. 7, lines 24-29 & Col. 9, lines 3-9), which meets the limitation of a telephone server configured for securing the exchange of data between said sender device and said receiver device, said telephony server coupled to said sender device by the communications link, said sender device, at a first interface, configured to encrypt selected data for communication to a receiver device, said telephony server is configured to permit coupling of said sender device and said receiver device for communication of said encrypted data without routing through said telephony server following authentication of both said sender device and said receiver device, said sender device is configured for initiating a second transmission over the communication link with said receiver device, said receiver device, at a second interface, is configured to respond to the second transmission from said sender device and to decrypt the selected encrypted data received from said sender device, at least two modems, each communication with one of said two interfaces, said switch and said modems are digital, and the switch connects digital outputs of said modems, a computer coupled to said sender device for selected data information, and for selecting a recipient for said selected data to be sent to, and a computer coupled to said receiver device for controlling the receipt of selected data from said sender device. Kaufman does not specify the type of network that is utilized for communications in figure 5. Baratz discloses a network based communication system wherein the network can include public switched telephone network having a switch (Col. 4, lines 60-61), private branch exchange, or wide area networks that can utilize T1 telephone connections (Col. 4, lines 6-34), which meets the

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limitation of a sender device configured for connection to the public-switched telephone network (PSTN), a receiver device configured for connection to the PSTN, a telephony switch configured for operation on the PSTN for routing calls between a sender and receiver, initiate a telephone call to said telephony server, known to said sender device, with a first transmission across a communications link through the telephony switch operating on the PSTN, establishing a connection over the PSTN through said telephone switch from said sender device, which has been authenticated, to said receiver device which has also been authenticated, wherein said system is configured for securely exchanging data over the PSTN as a single call connection from the sender device through the PSTN in response to authentication of both said sender device and said receiver device, at least one of said interfaces comprises telephone connection. It would have been obvious to one of ordinary skill in the art at the time of the invention to try one of the networks discussed in Baratz as the communication network in Kaufman because the networks have been identified as a finite number of networks that could be implemented by one skilled in the art in a predictable manner. Kaufman does not disclose a billing system. Baratz discloses utilizing a billing system in the communication network (Col. 7, lines 50-59), which meets the limitation of creating a record for billing of communications service performed over the PSTN by said system, said record for billing of communications service performed over the public switched telephone network (PSTN) by said system is configured for billing users on a per-call and/or per-minute basis for use of service provided by said system, said record for billing of communication service is configured for submitting charges to appear on a telephone bill of a user of said system, said record for billing is provided to a local exchange carrier, or local telephone service provider, which incorporates the billing into a conventional phone bill for

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payment by a customer. It would have been obvious to one of ordinary skill in the art at the time the invention was made for the communication network of Kaufman to include a billing system in order to provide the capability for tracking system usage as taught by Baratz (Col. 7, lines 50-52).

Referring to claims 11, 13, Kaufman discloses that the sender and receiver include modems (Col. 8, line 51), which meets the limitation of said sender device and said receiver device comprise secure modem devices (SMD) configured for following a cryptographic protocol in cooperation with said telephony server, said sender device and said receiver device, at said first and second interfaces, comprise digital modems. Kaufman does not specify the type of network that is utilized for communications in figure 5. Baratz discloses a network based communication system wherein the network can include public switched telephone network having a switch (Col. 4, lines 60-61), private branch exchange, or wide area networks that can utilize T1 telephone connections (Col. 4, lines 6-34), which meets the limitation of at least one telephony switch is coupled between the modems coupled at said first interface and said second interface, and wherein said telephony switch and said modems are digital, and said telephony switch connects digital outputs of said modems. It would have been obvious to one of ordinary skill in the art at the time of the invention to try one of the networks discussed in Baratz as the communication network in Kaufman because the networks have been identified as a finite number of networks that could be implemented by one skilled in the art in a predictable manner.

Referring to claim 12, the claims represent a possible configuration and do not require any particular structure or claim steps to be performed (MPEP 2111.04). Therefore, the limitations of claim 12 fail to limit the claim scope.

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Referring to claim 18, Kaufman discloses an operator interface (Col. 9, lines 18-23), which meets the limitation of an operator interface configured to allow a sender to select the data which is to be transferred, and for selecting a recipient of that data.

Referring to claim 19, Kaufman discloses that the tickets are used to encrypt/decrypt data sent between workstations in the network (Figure 5 & Col. 7, lines 24-29 & Col. 9, lines 3-9), which meets the limitation of said first transmission is executed in response to aggregation, and encryption of data selected by a sender for said sending device, and the selection of an authorized recipient. Kaufman does not disclose that the information is hashed prior to be encrypted and transmitted. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made for the information of Kaufman to be hashed prior to being encrypted and transmitted to the recipient in order to verify that the data received is the same data which was transmitted as taught by Kaufman (Col. 4, lines 39-65).

12. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaufman, U.S. Patent No. 5,491,752, in view of Baratz, U.S. Patent No. 5,742,596, and further in view of Schneier, Applied Cryptography. Referring to claim 4, Kaufman does not specify the type of network that is utilized for communications in figure 5. Baratz discloses a network based communication system wherein the network can include public switched telephone network having a switch (Col. 4, lines 60-61), private branch exchange, or wide area networks that can utilize T1 telephone connections (Col. 4, lines 6-34), which meets the limitation of in response to said sever establishing a connection over the public switched telephone network (PSTN) from said sender device to said receiver device. It would have been obvious to one of ordinary skill in the art at the time of the invention to try one of the networks discussed in Baratz as the

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communication network in Kaufman because the networks have been identified as a finite number of networks that could be implemented by one skilled in the art in a predictable manner. Kaufman discloses that the terminals receive their keys from the server (Col. 8, line 66 - Col. 9, line 9). Kaufman does not disclose that the terminals receive their keys from each other using a handshaking protocol. Schneier discloses a terminal to terminal key exchange protocol version of Diffie-Hellman that utilizes a handshaking process to exchange encryption keys (Page 516, Section 22.2), which meets the limitation of said sender device and said receiver device perform a handshaking process and then communicate encrypted data from sender to receiver, and/or from receiver to sender. It would have been obvious to one of ordinary skill in the art at the time the invention was made for the keys of Kaufman to be exchanged using the terminal to terminal method described in Schneier because the method is not vulnerable to man-in-the-middle attacks as taught by Schneier (Page 516, Section 22.2).

13. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaufman, U.S. Patent No. 5,491,752, in view of Baratz, U.S. Patent No. 5,742,596, and further in view of Anderson, U.S. Patent No. 5,283,829. Referring to claim 9, Baratz does not disclose payment for billed services electronically. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide for electronic bill payment in order to obviate the expense and hassle of paying bills via check and regular mail as taught by Anderson (Col. 1, lines 57-58).

Allowable Subject Matter

14. Claim 3 is allowed.

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The following is a statement of reasons for the indication of allowable subject matter:

The claimed invention generally concerns secure exchange of data over a public switched telephone network wherein the sending device first transmits encrypted identification information for the sender and receiver to a telephony server. The server decrypts the identification information and authenticates the sender. Once the sender is authenticated, the server uses a telephony switch to connect to the identified receiver for authentication of the receiver. Once the receiver is authenticated, the connection is transferred from the sender to the receiver to exchange encrypted data over the PSTN through the switch. A record of billing is created for billing communications services performed over the PSTN.

The prior art does not disclose or make obvious the claimed features described above, wherein this composite recitation incorporated into claim 3, renders the claim allowable.

Claim 2 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Archibald, U.S. Patent No. 5,301,246

Mihm, U.S. Patent No. 5,249,230

Brown, U.S. Patent No. 5,455,863

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BENJAMIN E. LANIER whose telephone number is (571)272-3805. The examiner can normally be reached on M-Th 7:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Benjamin E Lanier/
Primary Examiner, Art Unit 2432